

**COMMUNITY PERCEPTIONS AND FACTORS
ASSOCIATED WITH CONTRACEPTIVE USE AMONG
ADOLESCENT FEMALES IN MAZABUKA DISTRICT,
ZAMBIA**

By

DANIEL MUDENDA

**A dissertation submitted to the University of Zambia in partial
fulfilment of the requirements of the degree of Master of Public Health
in Population Studies**

**THE UNIVERSITY OF ZAMBIA
LUSAKA**

2019

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(CANDIDATE) MUDENDA DANIEL

ABSTRACT

Over the last few decades, there has been little evidence of young people accessing information necessary for Sexual Reproductive Health decision-making. Adolescent sexual and reproductive health (SRH) has increasingly been on national health agendas of many countries, including Zambia. One of the major causes of these agendas is the concern against early childbearing. Access to youth-friendly health services such as contraceptives is vital for ensuring the well-being of adolescents. This study would help determine the role of contraception in preventing early childbearing among young people aged 16-19 years who were sexually active.

The study was a cross-sectional sample survey covering 369 urban secondary school adolescent female pupils (Grades 10-12) aged 16-19 years and some members of the urban community in Mazabuka. It employed a mixed-method approach in which both quantitative and qualitative techniques were used. These approaches were treated independently at data collection and analysis. A semi-structured questionnaire was used to determine the level of modern contraceptive use among adolescent female pupils as an outcome variable. Focus group discussions (FGDs) with purposively selected parents and interviews with purposively selected key informants (school guidance teachers and SRH personnel) provided data on community perceptions on adolescent contraceptive use.

The results show that the prevalence of modern contraceptive use among adolescent females stood at 17% (65/369) whereas the prevalence of adolescents who regularly indulged in sexual activity was (26.8%). Frequency of sex (OR 4.41, 95% CI 2.9, 6.6, p-value <0.001), visits to a health facility (OR 2.63, 95% CI 1.2, 5.9, p-value 0.019) and values and belief systems (OR .18, 95%CI .1, .37, p-value <0.001) are the major factors that had significant association with contraceptive use. Secretiveness and fear of social stigma were cited as reasons for adolescents not accessing modern contraceptive services. Findings also showed existence of myths and beliefs held by both the adolescents and the community, relating to lack of information on some effects of modern contraceptive use and access to relevant SRH services. Adolescents largely did not visit health facilities for alternative services. Various community values relating to cultural and religious backgrounds exerted an influence on decision-making among adolescents regarding the use of modern contraceptives. Socio-cultural values played an important role in relation to adolescent response to contraceptive use.

Adolescent access to SRH services and the decision whether or not to use them is primarily influenced by other people from the socio-cultural environment of Mazabuka. This study demonstrated the need for comprehensive SRH services accessible to adolescents in Mazabuka district. It also suggested the need for sensitisation of communities for change of mindsets for adolescents to be better equipped with contraceptive information and knowledge in order to enhance decision-making that promotes sexual reproductive health of adolescents.

Keywords

Adolescent, Modern contraceptive use, Community perceptions, Mazabuka, Zambia

ACKNOWLEDGEMENTS

My sincere gratitude goes to faculty of the University of Zambia, School of Public Health, particularly my supervisors: Dr Jeremiah Banda, Dr Rosemary Ndonyo Likwa and Mrs. Twaambo Hamoonga Nkwendeenda for their tireless guidance through the course in general and this study in particular.

I duly acknowledge the invaluable support of Administrators of institutions I visited in the course of my data collection; community members who participated in the discussions; the pupils as well as their parents who assented to their participation in the study. Appreciation also goes to my research assistant and other colleagues and classmates who contributed in different ways to help make this study a success.

My special indebtedness goes to my wife Beauty, and our children: Lucy, Chabota, Twalumba and Shoma for their unwavering support, encouragement and patience during the time they had to cope with loss of quality family time in the course of my immense field- and deskwork during the processes leading to the completion of this study.

I specially thank God for the good health He granted me during the entire course of my work.

DEDICATION

To the memory of Salia Muloongo, my late dear mother, who taught me the value of consistent commitment to the achievement of a dream to an extent she spent her own life for me to attain a life of my own and to be useful and willing to sacrifice for the good of all mankind.

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ABBREVIATIONS/ACRONYMS

CSE	Comprehensive Sexuality Education
CSO	Central Statistical Office
DEB	District Education Board
FGDs	Focus Group Discussions
ICPD	International Conference on Population Development
IDIs	In-depth Interviews
IPA	Innovations for Poverty Action
IPPF	International Planned Parenthood Federation
LMIC	Low- and Middle-income Countries
MDGs	Millennium Development Goals
MoFNP	Ministry of Finance and National Planning
MoH	Ministry of Health
NPC	National Population Commission
SRH	Sexual Reproductive Health
STDs	Sexually Transmitted Diseases
STIs	Sexually Transmitted Infections
WHO	World Health Organisation

CHAPTER ONE: INTRODUCTION

1.1 Background

Over the last few decades, adolescent sexual and reproductive health (SRH) concerns have increasingly been on national health agendas of many countries, including Zambia (WHO, 2014). One of the major causes of adolescent sexual reproductive health concerns is early childbearing. Thus, many countries have focused predominantly on sexual behaviours among adolescents (WHO, 2004). The World Health Organisation, however, further observes that for a long time, Sexual and Reproductive Health programmes and services have focused primarily on older women (WHO, 2012). This observation implies that other players in reproductive health such as men and young people often lack information necessary for sexual and reproductive health decision-making. Therefore, access to youth-friendly health services is vital for ensuring sexual and reproductive health (SRH) and general well-being of adolescents (Denno et al., 2014).

The World Health Organisation reports that there has been a marked, although uneven, decrease in the birth rates among adolescent women since the 1990s, but about 11% of all births worldwide are still to girls aged 15-19 years old (WHO, 2014). About 16 million girls aged 15-19 and some 1 million girls aged below 15 give birth every year (UNFPA, 2013). Adolescent girls, especially younger girls, are particularly vulnerable because they face the risks of premature pregnancy and childbirth. It is further observed that complications during pregnancy and childbirth are the second cause of death among the 15-19 year-old girls globally (WHO, *ibid.*).

Moreover, the World Health Organisation further records that some 3 million girls aged 15-19 undergo unsafe abortions every year (WHO, 2014). Apart from the risks of unsafe abortion, babies born to adolescent mothers face a substantially higher risk of dying than those born to women aged 20-24 (WHO *ibid.*).

A matter of great concern is that the distribution of the majority of the births that occur to young people aged 15-19 years; up to 95% do occur in low- and middle income countries. This indicates that adolescent pregnancy is ultimately a major contributor to maternal and

child mortality, and ultimately to the cycle of ill-health and poverty (Roberts, 2018). The 2014 World Health Statistics indicate that the crude global birth rate (CBR) among 15-19 year olds was 49 per 1,000 girls, where country rates ranged from 1 to 299 births per 1,000 girls, with the highest rates being in sub-Saharan Africa (WHO, 2014).

One of the key targets of the national population policy in Zambia is to reduce the proportion of adolescents having children from 25% to about 13% by the year 2030 (MoFNP, 2012). However, adolescents face unique barriers to reproductive health services. Many countries have laws that prohibit people less than 18 years of age from accessing contraceptive services without parental or spousal consent, thereby denying many sexually-active adolescents access to those services (Pietrangelo, 2018). Some factors which constrain adolescents from accessing modern contraceptives are of cultural, moral or political nature. Some people, especially in developing countries consider use of contraceptives as a repressive plan by the rich developed countries to weaken the poor countries by constraining their populations (Pietrangelo, *ibid*) .

In view of Vision 2030, the government is committed to the fundamental and humane principle in the development of the health care systems to provide Zambians with equity of access to effective quality health care as close to the family as possible (Ministry of Health, Vision 2030). Primary health care should be action-oriented and focused on promotive, preventive, curative and rehabilitative activities within and outside the health sector aimed at tackling the main health problem in the communities, paying particular attention to the underserved, who may be sexually at high risk of pregnancy and vulnerable groups such as women, youths and children (Shajanika, 2014). It is projected that the Vision 2030 plan will incorporate and localise the Sustainable Development Goals (SDGs) and provide an entry point for further mainstreaming and a roadmap for their implementation through social investment and human development (UNDP, 2013).

1.2 Statement of the Problem

In many countries, the rates of unwanted births and unmet demand for contraception remain high (Innovations for Poverty Action, 2010). The proportion of young women reporting

unintended pregnancy and unmet need for contraception remains high in developing countries. The issue is that unintended pregnancies are associated with increased risk of unsafe abortions, maternal morbidity and mortality (Akintade et al., 2011). In order to avert these unintended pregnancies and consequent adverse outcomes, contraceptive use has been prioritised as a key intervention. Improving the universal access to sexual and reproductive health services including contraceptives was a key target of the Millennium Development Goals (MDGs).

It is further observed that there is a large unmet need for contraception and family planning worldwide (IPA, 2012). Access to contraceptive services and information is of particular significance in sub-Saharan Africa due to persistently high rates of HIV/AIDS and a high incidence of maternal mortality (UNFPA, 2013). However, inconsistent or complete non-use of birth control measures (contraceptives) among sexually active females in the reproductive age group is a sure way of triggering high pregnancy rates. A major concern, therefore, is that a quarter of the estimated 20 million unsafe abortions and 70,000 related deaths each year occur among women aged 15–19 years (UNFPA, 2004).

In Zambia, the trend of fertility rates raises the need for contraception. For example, in 2010 there were some 14,700 pupil pregnancies and the figure rose to above 15,000 in 2011 (Ministry of Education, 2012). Family planning is an essential component of Zambia's National Health Strategic Plan 2011-2015 (Ministry of Health, 2011). It continues to be a priority for the country and is highlighted in the Revised Sixth National Development Plan, 2013-2016 (Ministry of Finance and National Planning, 2014). The policy ideal for this strategy is to initiate and sustain measures to slow the nation's high population growth, enhance people's health and welfare, and prevent premature death and illness, especially among the high risk groups of mothers and children. The government's policy is to reduce the high level of fertility, particularly adolescent fertility, and to improve sexual and reproductive health, including family planning, so as to encourage a norm of small family size (MoFNP, 2012). Given this scenario, fertility levels should be declining. The latter can sustainably happen if family planning services can be accessible to all sexually-active persons in the reproductive ages.

Mazabuka District is not an exception to the challenge of unmet need for contraception among adolescents. The area attracted investigation due to its unique socio-economic and demographic dynamics.

Mazabuka schools continue to record levels of pregnancy among school-going adolescents, which is an indication that these adolescents are sexually active and there is need for pregnancy prevention measures such as contraception. The following table shows the numbers of pregnancies among school girls in the district as recorded by the Ministry of Education in Mazabuka over a three year period:

Table 1: Pupil Pregnancy Data, 2013-15

Year	2013	2014	2015	Total
No. of girls	51	54	53	156

Source: *Ministry of Education, Mazabuka District Education Board*

These pregnancy figures among adolescent young women are a matter of particular concern. They may be linked to risk of not only sexually transmitted infections (STIs) but also likely risk of maternal mortality resulting from unsafe abortion and complications in childbirth among young women. For instance, safe legal abortion is rarely available and accessible. What is of particular concern is that, despite government efforts to promote youth-friendly services such as Youth-friendly Corner operating in local health facilities, these services do not seem to sufficiently attract young people to fully utilise them. Pettifor and Subramaniam (2018) assert that education could expand the outcomes that such programmes would yield as they traditionally target to include uptake of essential services among vulnerable and marginalised adolescent populations. However, there is need to examine prevailing community perceptions and attitudes regarding contraceptive use among female adolescents in Mazabuka.

1.3 Justification of the Study

In many parts of Zambia, particularly in rural areas, a number of challenges hinder women and young people from accessing family planning services (IPA, 2010). This may be the case in Mazabuka. The study, therefore, sets out to investigate possible underlying factors that could establish a relationship with adolescent contraception. In so-doing, it could raise awareness for strengthening of the rights of young people to have full access to safe, effective, affordable and acceptable methods of fertility regulation, particularly contraception.

The study also envisions attainment of harmonisation which could narrow apparent gaps between health and education policies regarding adolescent female sexuality. According to CSO (2015), there was a three-fold increase in contraceptive use from 15% to 49% among married women from 1992 to 2014. However, given the Zambian social perspective regarding contraception, the increase does not include young women of reproductive age (15-19) who are mostly still in school. Even intended pregnancies among young women are of appropriate policy and public health relevance because of the risks associated with them. The risk of death associated with pregnancy is about a third higher among 15 to 19 year olds than among 20 to 24 year olds (Nove et al, 2012). Hence, the undertaking of this study to examine the unmet need for contraception among girls aged 15-19 years.

In carrying out this study, it was also hoped to bring about an environment in which adolescent learners will be receiving an effective comprehensive sexuality education (CSE) complemented by provision of appropriate and safe sexual reproductive health (SRH) services. Thus, the results of this study should, in the medium- and long-term, help reduce adverse socio-economic effects on the population. Eventual low levels of adolescent pregnancy might serve as references or models for efforts to reduce levels elsewhere.

1.4 Research Question

1. What are the community's perceptions of modern contraceptive use among adolescent females in Mazabuka district?

2. What factors could be associated with the level of modern contraceptive use among adolescent females in Mazabuka district?

1.5.0 Research Objectives

1.5.1 General Objective

To determine the community's perceptions and factors associated with contraceptive use among adolescent females in Mazabuka District.

1.5.2 Specific Objectives

1. To estimate the level of modern contraceptive use among adolescent females in Mazabuka;
2. To identify factors associated with modern contraceptive use among adolescent females in Mazabuka ;
3. To describe community perceptions towards the utilisation of modern contraceptives among adolescent females in Mazabuka.

CHAPTER TWO: LITERATURE REVIEW

This chapter examines existing literature on the topic of use of modern contraceptives among young people. This is done at basically global, regional and local levels considering factors that determine use of modern contraception and also the perceptions of the community on adolescents using modern contraception.

2.1 Use of Modern Contraceptives

Countries have a responsibility to ensure women's and adolescents' access, both in law and practice, to contraceptive information and services. All persons have the right of access to the widest possible range of safe, effective and acceptable methods of fertility regulation (IPPF, 2011).

Access requires services to be non-discriminatory, affordable, and physically available. This includes being able to reach the necessary contraceptive information without legal barriers such as parental consent requirements. Restrictions on particular contraceptive methods based on marital status, or requirements that women have a minimum number of children before being able to access contraceptives impede adolescents' access to contraceptive information and services. Since research suggests that behaviour in adolescence sets the pattern for the rest of an individual's life, the scarcity of existing sexual and reproductive health-care programmes for adolescents is particularly disturbing (International Planned Parenthood Federation, 2003).

Due to limited access to contraceptives the consequences of unsafe abortion and unwanted pregnancies are also extremely worrying. In addition, inadequate sexual health care contributes to the spread of sexually transmitted infections (STIs) and may lead to damaging effects on an adolescent's lifelong health and fertility. In response to this need for increased attention to adolescent fertility, the 1994 International Conference on Population and Development (ICPD, 1994) stressed the importance of taking adolescent sexual and reproductive health needs seriously, and emphasized that these needs should be seen as basic human rights. In the ICPD Programme of Action, governments, in collaboration with non-

governmental organisations (NGOs), are urged to meet the special needs of adolescents while safeguarding their rights to privacy, confidentiality, respect and informed consent.

In the United States, each State legally entitles adolescents to consent to treatment for medically emancipated conditions that may include contraception, pregnancy, diagnosis and treatment of sexually transmitted diseases (STDs), human immunodeficiency virus or other reportable diseases, treatment of substance abuse problems, and mental health (Trussell, 2011). Having the legal right to consent to care is closely related to being guaranteed confidentiality—adolescents who are considered cognitively mature enough to give consent are also granted the right to patient confidentiality (Finer and Hensha, 2006). However, the availability of confidential care for medically emancipated conditions among primary care practices is not well-characterised.

Sexually active adolescents – both married and unmarried - need contraception. All adolescents in low and middle-income countries (LMIC) - especially unmarried ones - face a number of barriers in obtaining contraception and in using them correctly and consistently. Effective interventions to improve access and use of contraception include enacting and implementing laws and policies requiring the provision of sexuality education and contraceptive services for adolescents; building community support for the provision of contraception to adolescents and of providing sexuality education within and outside school settings.

There is a high rate of unintended pregnancy among teenagers because of inconsistent or no use of contraceptives. Manlove et al. in their 2008 study show that teenagers who had waited a longer time between the start of a relationship and their first sexual debut with that partner discussed contraceptive use before having sex (Manlove et al., 2008).

Kumar and Brown (2016) conducted a study in the United States after noticing that country's continued highest adolescent birth rate of any industrialised country. The study found a number of barriers that included costs to institutions which provided contraceptive care to recipients; consent and confidentiality for adolescent patients; providers' attitudes, misconceptions and limited training on the part of the community; and patients' lack of

awareness or misconceptions. The study also identified individual-level access barriers such as providers' misconceptions and gaps in technical training as well as patients' lack of awareness.

2.2 Factors Shaping Contraceptive Use

Improving the reproductive health of young women in developing countries requires access to effective methods of fertility control, but most of them rely on traditional methods rather than modern contraceptives such as condoms and oral or injectable hormonal methods. Williamson et al (2009) conducted a systematic review of qualitative research to explore the limits to modern contraceptive use identified by young women in developing countries.

In 2006 the Ghana Ministry of Health instituted new guidelines to ensure that abortions be provided legally and safely to women in need. However, only 4% of women seeking abortions were aware of these services and 45% of abortion services are still unsafe, making it the second most common cause of mortality among young women in Ghana. Condom use is even lower. Among sexually active adolescents aged 15-19, less than 20% of girls and 30% of boys reported using condoms during the last sexual encounter. This contributed to making Ghana the country with the highest unmet need for contraception among youth in the world (MacQuarrie, 2014). A recent study among urban adolescents in Ghana found that 86% of boys who had made a girl pregnant and 74% of girls who had ever been pregnant, reported that the pregnancy was unintended. Of these, 57% of young men and 23% of young women reported ending the pregnancy in abortion (Champiti, 2016). This indicates high levels of risk among young people and the need to consider measures to safeguard their health.

Lack of health care services pertaining to reproductive health (RH) or difficulty in accessing them are among the inhibiting factors that could account for low contraceptive use. A study conducted in Ethiopia to examine health care workers' attitudes toward sexual and reproductive health services to unmarried adolescents found that nearly one third (30%) of health-care workers had negative attitudes towards providing RH services to unmarried adolescents. Close to half (46.5%) of the respondents had unfavourable responses towards providing family planning to unmarried adolescents (Delahun, et al. 2013).

About 13% of health workers agreed to set up penal rules and regulations against adolescents that practised pre-marital sex (Delahun, et al., *ibid*).

A similar study by Ahanonu (2013) to assess the attitude of health-care providers towards providing contraceptives for unmarried adolescents in four Local Government Areas in Ibadan, Nigeria found that many health-care providers had unfavourable attitudes towards the provision of contraceptives for unmarried adolescents. The study recognised a need for further training of health-care providers to address this situation. More than half (57.5%) of the respondents perceived the provision of contraceptives to unmarried adolescents as promoting sexual promiscuity.

Moreover, in South Africa, a similar study found that the nurses generally stigmatised adolescent sex and felt very uncomfortable giving contraception to adolescent girls. They often tried to influence the adolescents who came for contraception not to have sex. Parental permission was also sought from adolescents before contraceptive services could be provided even though legally, parental permission is not needed for minors to be given contraception in South Africa (Wood and Jewkes, 2012).

Results of a similar study on attitudes conducted among nurse-midwives providing sexual and reproductive health-care in Kenya and Zambia showed that the majority approved of contraceptive use by sexually active girls and were prepared to counsel boys on condom use. However, most of the nurse-midwives in both countries reported that their first option, which is abstinence from sex, would be to recommend to unmarried adolescent boys and girls abstinence from sex when they ask for contraceptives rather than offer them contraceptives. Notably, those who had received continuing education on adolescent sexuality and reproduction showed a tendency towards more youth-friendly attitudes (Warenus et al, 2016).

The influence of society on attitudes of both the health personnel and adolescent would-be seekers of SRH services cannot be overlooked. For instance, the same study done by Ahanonu (2013) found that the attitude of 42.7% of them was informed by the Nigerian culture which does not support premarital sex.

About half (51.7%), reported that unmarried adolescents should be asked to abstain from sex rather than providing them with contraceptives. Over a third (44.2%) reported that providers should not provide services for both married and unmarried adolescents (Ahanonu, 2013).

Adolescents have identified lack of confidentiality as a barrier to seeking health care; they are more willing to seek care from and communicate with physicians who assure confidentiality and may forgo health care to prevent their parents from finding out (National Population Commission (NPC) and ICF Macro, 2008, 2009).

Another study in Ghana found that adolescents in both rural and urban areas are often underserved by family planning service providers. This limits the knowledge level of young men and women about contraceptive methods. The purpose of this study was to examine what determines contraceptive use among adolescents. It was found that most adolescents would use contraceptives if they did not want to get pregnant or if they wanted to continue with their education. Overall, the desired family size was lower among all the adolescents. It was observed that once a teenage woman has had a child, contraceptive use prevalence rose to a level comparable to that of women in their twenties (Yidana et al., 2015).

A study conducted in Nigeria documents that unplanned sexual intercourse is the main reason for unwanted pregnancies for Nigerian adolescents and many adolescents who end up with unwanted pregnancies usually resort to abortion. Abortion is illegal in Nigeria, except on the grounds to save the life of the mother. As a result, many abortions are done in unsafe environments and these illegal abortions have severe consequences that can be life-threatening, sometimes, leading to maternal deaths (Adogu et al. 2014). Premarital exposure to pregnancy risk has increased, with a widening gap between sexual debut and age of marriage, and increased sexual activity prior to marriage (Bearinger et al., 2007). This places young women at increased risk when they are most socially and economically vulnerable. Reported sexual activity among adolescents in developing countries is generally high, although there is considerable variation between countries (Mensch et al., 2006).

2.3 Perceptions on Use of Modern Contraceptives

In Zambia, one of the activities included in the country's plan of action in SRH is to provide access to safe abortion to the full extent of the law to women receiving care at the University Teaching Hospital in Lusaka, and to increase the proportion of women leaving the hospital with knowledge of a contraceptive method. Zambian law regarding abortion is liberal, but in general it was not applied until very recently (Macha et al., 2014). The case of Zambia, therefore, provides an opportunity to explore the relationship between a legal framework that permits abortion on diverse grounds and the moral and political disputes around access to sexual and reproductive health services (Haaland et al., 2019). The proportion of legal terminations of pregnancy among patients at the University Teaching Hospital (UTH) increased from 3.2% in 2009 to 7.7% in 2011, while the percentage of women leaving the hospital with a contraceptive method increased from 25.3% to 69.4% over the same period (Macha et al., *ibid*). Considering the findings of many foregone studies in other countries, it is quite probable that these figures do not include adolescent young women who are sexually active. The restrictive aspects of the law were emphasized further when Zambia was declared a Christian nation. Some of these restrictive elements are still apparent in today's debate regarding abortion and contraception, particularly among young people (Haaland et al., *ibid*).

Condoms are a best known means of contraception and disease prevention among young people. However, the Ministry of Education and the Zambia National Union of Teachers banned the distribution of condoms in schools in 2004 stating that this was tantamount to encouraging premarital sex instead of propagating abstinence among young people (MOE, 2012; ZNUT, 2012). A survey conducted by a USAID-funded Education Quality Improvement Program (EQUIP 2) and the Ministry of Education (MOE), reported that the number of school-girls who fell pregnant trebled within a period of six years from 3,663 in 2002 to 12, 370 in 2008 (Equip 2 and MOE, 2008).

2.4 Conceptual Framework

After reviewing literature on Contraceptive use, the following conceptual framework was developed to help explore possible levels and factors pertaining to contraceptive use among adolescent females in Mazabuka. The framework shows linkages in factors that ultimately culminate in the levels of contraceptive use. The determinants of modern contraceptive use are considered in four categories. These are service delivery, socio-economic, socio-cultural as well as individual factors.

At the level of service delivery, the availability of adequate skilled personnel and facilities could encourage high levels of SRH service utilisation. This comprises a whole range of relationships that must ultimately ensure that supplies with adequate appropriate storage facilities are available and accessible to all the women who need them. This is reflected by Cleland et al. (2011) who observe that approximately 30% of all women use birth control, although over half of all African women would use birth control if it were available. Effective service delivery requires skilled personnel with foresight to manage timely procurement of the necessary materials for a variety of contraceptive packages to meet a corresponding range of needs. Poor policy guidelines on procurement and training coupled with service providers' attitudes would affect availability of supplies as well as their utilisation. Quality service delivery or lack of it suggests that those seeking the services of a facility do not have control over the services they are seeking. This calls for positive staff attitudes in order to make the facility attractive and responsive to the needs of the service seekers. If SRH care providers are not agents of promoting the services they provide, then they become a barrier to the utilisation of the service. So accessibility might be lacking even though everything was available.

Socio-economic factors also play a key role in determining the levels of contraceptive service utilisation among adolescents. Young people are still largely dependent on their parents for their livelihood and, thus, parents are almost entirely responsible for all the decision-making regarding their children, healthcare inclusive. This suggests that parents with low socio-economic status are likely to have low levels of education as well as knowledge of health

services their families require. Therefore, even those who might wish to access mainstream essential healthcare may not if it involves some cost. The issue of distance to the facility for those who are seeking its services also needs to be considered. Distance is a factor in accessing general health-care as it attracts not only travel costs but is also viewed as time-consuming. Thus, given the low levels of education and knowledge among parents, young people in the lower socio-economic bracket are also likely to be disadvantaged as they, like their parents, would consider health-seeking, particularly SRH as a luxury. There is need for some knowledge of contraceptive use among young people. One's level of education will, to a large extent, determine their health-seeking behaviour.

The other facet to the acceptability of contraception hinges on socio-cultural factors. The societal value systems and norms largely determine the perceptions and attitudes that spell an individual's response to contraceptive use. In Zambia, contraceptive services are not provided to school girls. This is attributed to societal reactions which make the issue of family planning a sensitive one each time suggestions are made about providing contraceptives to the adolescent (Chisenga, 2010). At the level of acceptance of birth control measures, society and religion play a critical role in terms of shaping of attitudes. Individuals that have grown up in devout Christian homes of certain denominations may have developed attitudes that predispose them to being non-contraceptive users.

Apart from the aforementioned issues that may be considered external, an individual's internal influences play an essential role in determining their choices and actions. Severy and Newcomer (2009) illustrate this in stating that how methods smell, taste, feel, and otherwise appeal to the senses can greatly affect their sexual acceptability, particularly for methods used at the time of sexual activity. For example, women have described a number of sensory detractions including irritation (Tafari, et al, 2010). This signifies the influence of individual experiences in deciding for contraception or not. It may in turn bring about development of negative attitudes regarding choice of alternative methods. Hence, unmarried young women who may not have proper access to counselling services will shy away from any form of pregnancy prevention for fear of social stigma.

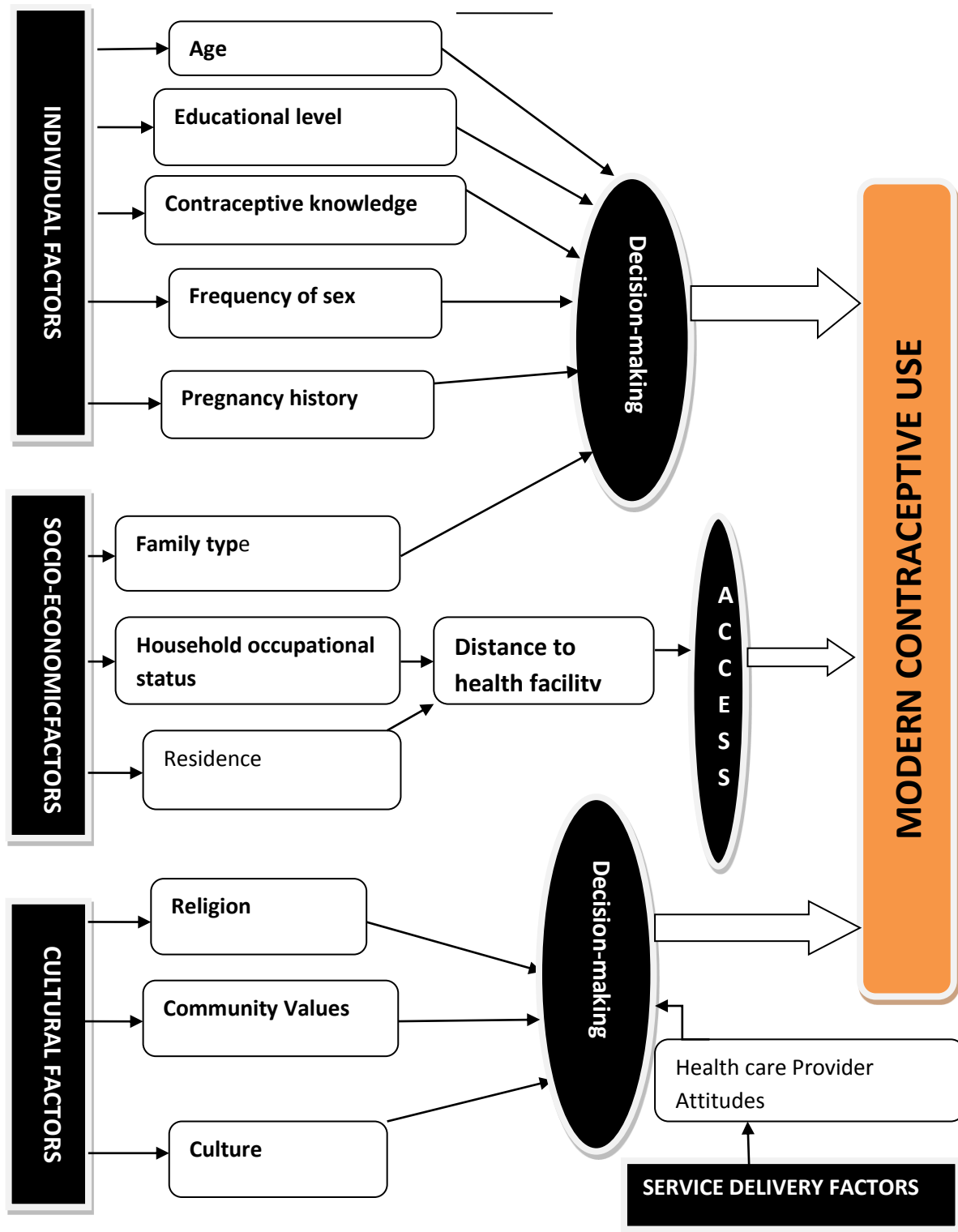


Fig. 1: Conceptual Framework of Factors Associated with Contraceptive Utilisation among Adolescents

SOURCE: Researcher's ideas

CHAPTER THREE: METHODOLOGY

3.1 Study Design

The study was a cross-sectional sample survey, meaning that it was conducted at one point in time to determine the associations between various variables and an outcome variable of interest. It was conducted among female adolescent pupils and selected community members. Quantitative and qualitative techniques were used in the explanatory sequential mixed methods approach. The qualitative results complemented the quantitative results by bringing out the some possible salient issues that contributed to the low levels of contraceptive use among school-going adolescent girls.

3.2 Study Site

The study was carried out in Mazabuka, Southern Province. Mazabuka town is located on the Great North Road 125 km southwest of Lusaka, the capital of Zambia. It is mainly an agricultural area with a population of 230,972 the third largest share of the provincial population after Kalomo and Choma (CSO, 2012). The town is home to the Nakambala Sugar Estates, a leading producer of Zambia's sugar. The town attracts a lot of job-seekers in the sugar industry from various parts of the country. Sugarcane cultivation extends to small-scale out-grower schemes that have empowered the local community. There are various other socio-economic activities such as merchant trading in hardware and construction, super- and hypermarkets, clothing and a wide range of small- and medium scale enterprises (SMEs).

3.3 Study Population

The study targeted senior secondary school female pupils aged 16-19. That was considered because these were in the prime of adolescence and in the standard reproductive age (15-49).

3.4.0 Sampling

3.4.1 Sample size Determination

The survey sample size was determined using the formula:

$$n = \frac{z^2 p(1-p)}{d^2} \quad n = \frac{1.96^2 * 0.5(1-0.5)}{0.02^2} = 384$$

$$d^2 \quad 0.05^2$$

where: n = required sample size

d = precision

p = estimated prevalence

z = confidence interval level (Z score)

d = 0.05; p = 0.5%; Z=1.96

10% non-response = **38**

Total sample required = 422

3.4.2 Sampling Methods

(a) Quantitative Method

One-stage cluster sample design was used to select the schools to be included in the survey. Out of the eight (8) public and grant-aided secondary schools in Mazabuka, namely Nanga, Kaonga, Mazabuka Girls', St. Patrick's, Kawama, Makoye, St. Joseph's Girls' and Nkonkola, four (4) secondary schools were purposively selected. Thus, they formed four strata. A list of female pupils aged 16-19 years formed the frames for each of the strata (schools). From each school, about 105 girls in grades 10-12 aged 16-19 years were selected to participate in the survey.

A sample of pupils was systematically selected from a list of pupils in each of the selected schools. The method of systematic sampling was employed in that after determining the selection interval, a random start from 1 and the interval was selected and added to the first selection until the required sample size was attained in each of the four schools.

(b) Qualitative Method

Community participants were selected from the four school catchment communities. These included teachers, health personnel and parents. Community members (parents) were purposively selected for focus group discussions (FGDs). Health care providers

responsible for SRH and Guidance teachers were also purposively targeted specifically as key informants (KIs) for their kind of duties.

3.5 Data Collection

(a) Quantitative Data

A semi-structured self-administered questionnaire was used during the interviews with the selected pupils. The pupils were guided through the questionnaire to ensure they understood the questions right and to encourage completeness of data.

(b) Qualitative Data

Key informants were subjected to in-depth interviews (IDIs) following a prepared guide. Data collection from community members was done through focus group discussions (FGDs) with selected consenting parents of the sampled girls. An audio recorder was used to collect information verbatim from consenting individual respondents and a notebook to record the highlights of the IDIs and FGDs respectively. In the case of community members, any verbatim record of local language used was later translated into English.

3.5.1 Data Quality Assurance

To ensure good data quality, the researcher trained an assistant who was involved in data collection. In order to ensure reliability of the data collected, the survey instruments were pre-tested. A finalised survey instrument was then used in collecting data, taking into account the results from the pre-test. In addition, the researcher closely supervised the data collection and processing exercise.

3.5.2 Inclusion Criteria

Senior secondary school (grades 10-12) girls aged 16-19 years were eligible for selection as respondents for the study. These were targeted as they were considered more likely to be sexually active and were construed as better able to express themselves. Selected parents or guardians of sampled schoolgirls were targeted for interviews.

3.5.3 Exclusion Criteria

Girls who were new in the study area were excluded from participating in this study. Newness in the study area meant those who had not been resident in the locality up to three months prior to the conduction of this survey. This was to avoid distortion in the results as some of the questions in the questionnaire required data that went back into time.

3.5.4 Limitations

The study restricted its focus on in-school female adolescents. As a result of that, it could have left out quite a substantial proportion of not only out-of-school (and possibly married) adolescents but also even their male counterparts who could have made it come up with richer findings.

The sensitive nature of the study might in some way unknown also have affected some of the study outcomes. Within the selected schools, there were cases of apathy which resulted in non-response that subsequently affected the projected and intended sample size.

3.6.0 Ethical Considerations

All the necessary precautions and considerations regarding non-violation of the rights of individuals selected as respondents for this study were as much as possible taken. Ethical approval to carry out this study was obtained from the University of Zambia Biomedical Research Ethics Committee (UNZABREC, **Reference number 039-06-17**). Once in the field, the researcher provided the respondents with detailed information about their role and implications of their participation in the study. They were encouraged to participate but also advised on their freedom to decide whether or not to be involved as participation was purely voluntary. Participants were also informed of their freedom to withdraw their participation at any point if they felt like not continuing. The objective of the study was explained to the selected informants/ respondents and informed consent/assent obtained as applicable.

3.6.1 Informed consent

Before undertaking the study, the researcher had to explain its purpose to the participants and seek their consent. This was informed consent because the respondents had to decide whether or not to take part in the survey after being given full information about the study. Those who were not willing were free not to take part. Furthermore, those who wished not to continue with the interview were made aware of their freedom to opt out at any point during the interviews.

3.6.2 Assent for young respondents

Considering that the study was dealing with pupils who were generally young people, the researcher had to engage their parents. A letter was sent to parents with auspices of the school Administration to request their assent for their children to participate in the study. The researcher had to clearly state that the survey was purely an academic exercise in order to allay any undue fears respondents and assenters might have. Assurance was given that all the information that would be collected in this study would be treated as confidential. This meant that it would be kept secret and never be traced or linked to any individual respondent at any time later. For the completion of questionnaires by selected pupils, consideration was also made to request school authorities to consider allocating time that was convenient to them and did not conflict with their classes.

Variables: Their Operational Definitions and Measurements

Variable Description	Operational Definitions	Indicator	Scale of Measurement
Dependent variable:			
Contraceptive use	Whether or not using a contraceptive method.	1 – Yes 0 – No	Binary
Independent Variables:			

Age	Age of respondent at last birthday	1. 16 years 2. 17 years 3. 18 years 4. 19 years	Discrete
Educational level	School attendance by current grade of respondent	1. Grade 10 2. Grade 11 3. Grade 12	Ordinal
Family	Type of household respondent lives in	1. Both parents 2. Mother only 3. Father only 4. Other	Nominal
Residence	Estimated population density of area in which respondent lives	1. Low-, 2. Medium-, 3. High-density	Ordinal
Religion	Holding belief in and worship of a supreme-being	1. Catholic 2. SDA 3. Pentecostal 4. Other	Nominal
Household occupational status	Socio-economic status of the household by employment type of household head	1 GRZ 2. Private company 3. Business and SMEs	Nominal
Has boyfriend	Having permanent intimate relationship with a boy	1 Yes 0 No	Binary
Sex Debut	Has ever had sex	1 Yes 0 No	Binary
Information about contraceptive services	Source of information	1 Media 2. Friends 3. Parents 4. Other	Nominal
Pregnancy history	Has had a pregnancy	1 Yes 0 No	Binary
Frequency of sex	Approximate number of times have sex in three months	0. None 1. Once 2. Twice or more	Ordinal

Distance	Approximate distance to nearest health facility	1. 0-5 km (near) 2 6-10 km (far)	Categorical
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3.7.0 Data Entry, Processing and Analysis

(a) Quantitative Data

A questionnaire was used to collect data from the respondents . The data generated from the responses to the questionnaire were entered on excel and later imported into Stata software Version 13.0 for analysis. They were tabulated to determine proportions with regard to various variables. Descriptive statistics were generated and reported using proportions. The Chi-square test was used to determine associations between respective independent variables and the dependent variable (utilisation of modern contraceptives). The measures of association used were Odds Ratios and Confidence Interval of 95% and p-value of 0.05 significance level. Simple Logistic regression was also done to establish bivariate relationships between independent variables and the dependent variable using Stata Version 13.0.

(a) Qualitative Data

Qualitative data were prepared and manually organised at the end of each interview. The idea was to ensure proper labelling and coding that was consistent with keeping of the respondents' identities confidential. This was done by marking with unique codes all the notes and recordings extracted from the interviews. As much as possible, transcriptions were done verbatim. This, in turn helped in the formulation of thematic areas which were developed for discussion. The qualitative findings while generated independently complemented the quantitative findings by providing some salient aspects of explanatory linkages.

CHAPTER FOUR: RESULTS

4.1 Characteristics of Respondents

A total of 369 adolescent school-girls aged between 16 -19 participated in the survey. Table 4.1 shows the distribution of these respondents in relation to their various demographic and other characteristics.

Table 4.1: Associations between Independent Variables and Contraceptive Utilisation among Adolescent Females Mazabuka aged 16-19

Variable	YES	NO	TOTAL	P-value
	n (%)	n (%)	n (%)	(Chi2)
Age				
16	9 (7.6)	109 (92.4)	118 (32.0)	
17	30 (17.8)	138 (81.6)	168 (45.5)	
18	17 (24.6)	52 (75.4)	69 (18.7)	
19	9 (6.4)	5 (35.7)	14 (3.8)	
Total	65 (17.6)	304 (82.4)	369 (100)	< 0.001
Educational Level				
Grade 10	13 (10.9)	106 (89.1)	119 (32.2)	
Grade 11	17 (13.8)	106 (86.1)	123 (33.3)	
Grade 12	35 (27.5)	92 (74.1)	127 (34.4)	
Total	65 (17.6)	304 (82.4)	369 (100)	0.001
Family				
Both parents	37 (15.9)	195 (84.1)	232 (62.9)	
Mother only	11 (17.5)	52 (82.5)	63 (17.1)	
Father only	6 (35.3)	11 (64.7)	17 (4.6)	
Other	11 (19.3)	46 (80.7)	57 (15.5)	
Total	65 (17.6)	304 (82.4)	369 (100)	0.239

Religious Denomination				
Catholic	14 (20.5)	54 (79.4)	68 (18.4)	
SDA	26 (17.4)	123 (82.6)	149 (40.3)	
Pentecostal	10 (14.1)	61 (85.9)	71 (19.2)	
Other	15 (18.5)	65 (81.4)	81 (22.0)	
Total	65 (17.6)	304 (82.4)	369 (100)	0.784
Has Boyfriend				
No	11 (6.5)	158 (93.5)	169(45.8)	
Yes	54 (27)	146 (73.0)	200(54.2)	
Total	65 (17.6)	304 (82.4)	369 (100)	< 0.001
Been pregnant				
No	44 (13.4)	284 (86.6)	328(88.9)	
Yes	21 (51.2)	20 (48.8)	41 (11.1)	
Total	65 (17.6)	304 (82.4)	369 (100)	< 0.001
Frequency of Sex (in 3 months)				
Never	13 (4.8)	257 (95.2)	270 (73.2)	
Once	17 (39.5)	26 (60.5)	43 (11.7)	
Twice or more	35 (62.5)	21 (37.5)	56 (15.2)	
Total	65 (17.6)	304 (82.4)	369 (100)	< 0.001
Modern Contraceptive Knowledge				
No	21 (14.4)	125 (85.6)	146 (39.6)	
Yes	44 (19.7)	179 (80.3)	223 (60.4)	
Total	65 (17.6)	304 (82.4)	369 (100)	0.187
Visits to Clinic for Other Services				
No	43 (14.0)	264 (86.0)	307(83.2)	
Yes	22 (35.5)	40 (64.5)	62(16.8)	
Total	65 (17.6)	304 (82.4)	369 (100)	< 0.001

Hold Values/Beliefs				
No	23 (25.0)	50 (54.3)	92 (24.9)	
Yes	42 (15.2)	254 (91.7)	277 (75.1)	
Total	65 (17.6)	304 (82.4)	369 (100)	< 0.001

Table 4.1 shows associations between various independent variables and modern contraceptive utilisation among adolescent females aged 16-19 as an outcome variable of interest. Pearson's Chi-Square was used to test for association between each independent variable and contraceptive utilisation in each case in bivariate analysis with significance level at 0.005. The table shows only age ($p < 0.001$), educational level (< 0.001); having a boyfriend; frequency of sex ($p < 0.001$); having a history of pregnancy ($p < 0.001$); visiting a health facility for alternative services as well as holding some cultural or religious beliefs ($p < 0.001$) were significantly associated with contraceptive use all with p-values of less than 0.001.

The median age of the respondents was 17, which was in the majority of the sample at 45.5% (168/369). There was a steady reduction in the proportion of those aged 18 being about 19% (69/369) and tailing off to only a small minority of 3.8% (14/369) for those aged 19. Age was categorised with a view to accounting for any variations of statistical significance that might arise from one age level to the next.

Other characteristics included educational level which was categorised by school grade of each respondent. Family type, household occupational status and religious affiliation were some of the other demographics which were obtained about the sample. In terms of educational level, there were only minimal variations in the distribution of the sample so that the numbers were within a reasonable mean range of 32.3% (119/369), 33.3% (123/369) and 34.4% (127/369) for grades 10, 11 and 12 respectively.

By family type, the largest proportion of girls, about 63% (232/369) was from families with both parents whereas only 4.6% (17/369) lived with a single male parent. Female-headed households representing those who lived with mother only accounted for 17.1% (63/369).

Household occupational status was a socio-economic characteristic of interest. This was broken down and distributed into categories based on occupational means by which respective households from which the respondents came earned their living. These were in three categories as government (GRZ)-employed, private sector-employed and others. The category described as others comprised a wide range of economic activities ranging from small and medium scale enterprises to peasant farming. That was the leading activity at 43.4% (160/369) followed by those from GRZ (government-employed) nearly 30% (109/369) and the rest about 27% (100/369) being in private companies.

Religious affiliations of respondents were also considered. This socio-cultural characteristic placed the Seventh-Day Adventists (SDA) at about 41% representing 149 out of 369 selected girls. Other characteristics which were considered in the study of adolescent females included having a boyfriend, history of pregnancy, and frequency of sex. Knowledge of modern contraceptives and methods, visits to a health facility for alternative services and having an awareness of some values, beliefs or personal principles regarding use of contraceptives were taken into consideration as well.

Table 4.2: Multivariable Logistic Regression of factors associated with Contraceptive Use among Adolescent females in Mazabuka (Adjusted and unadjusted)

Variable	Unadjusted odds ratio (95%CI)	p-value	Adjusted odds ratio (95% CI)	p-value
Age	2.28 (1.6, 3.2)	<0.001	1.28 (0.7, 2.3)	0.410
Educational Level	1.83 (1.3, 2.0)	0.001	.79 (.4, 1.4)	0.444
Having Boyfriend	5.31 (2.7, 10.)	<0.001	1.58 (.7, 3.7)	0.300
History of Pregnancy	6.78 (3.4, 13)	<0.001	.40 (.1, 1.2)	0.099
Frequency of sex	6.78 (4.0, 8.)	<0.001	5.29 (2.9, 9.5)	<0.001
Visits to health facility	3.38 (1.8, 6.2)	<0.001	2.40 (1.0, 5.6)	0.042
Values/Beliefs	0.11 (.06, .19)	<0.001	.18 (.1, .4)	<0.001

Table 4.2 shows a multivariable logistic regression of factors associated with modern contraceptive use among adolescent females in Mazabuka. At unadjusted regression analysis, all the variables were significant with age (at AOR 2.28, 95% CI, 1.6, 3.2, p-value <0.001), educational level (UOR 1.83, 95% CI 1.3, 2.0, p-value 0.001), having a boyfriend UOR 5.31, 95% CI 2.7, 10.0, p <0.001), having a history of pregnancy (UOR 6.78, 95% CI 3.4, 13, p-value), frequency of sex (UOR 6.78, 95% CI 4.0, 8, p-value <0.001), visit to health facility (UOR 3.38, 95% CI 1.8, 6.2 p-value <0.001) and values (UOR 0.11, 95% CI 0.06, 0.19, p-value <0.001). After adjusting for confounding variables, only three variables remained significant for association with modern contraceptive use among female adolescents. These included: frequency of sex (AOR 5.29, 95% CI 2.9, 9.5, p-value <0.001), paying of visits to a health facility (AOR 2.4, 95% CI 1.0, 5.6, p-value 0.042) and holding of some cultural or religious values (AOR .18, 95% CI .1, .4, p-value <0.001). This implies that for every year a girl was older, she was five times more likely to use a contraceptive whereas, girls who visited the clinic were twice more likely to use a contraceptive than those who did not. Likewise, girls who held some cultural and religious values were 0.18 times less likely to use a contraceptive than those who did not. The factors that remained significant were adopted for the final model as shown in Table 4.3 below: An Investigator-led Stepwise regression was then done to come up with the best model.

Table 4.3: Final Model of Factors Associated with Adolescent Contraceptive use (following an Investigator-led Stepwise Regression)

Variable	Odds Ratio	95% C.I	P-Value
Frequency of sex	4.41	2.9, 6.6	<0.001
Visits to health facility	2.63	1.2, 5.9	0.019
Values/Beliefs	.18	.1, .37	<0.001

Table 4.3 presents the final model of variables representing factors associated with contraceptive use among adolescent females in selected schools of Mazabuka. Frequency of sex (OR 4.41, 95% CI 2.9, 6.6, p-value <0.001), visits to a health facility (OR 2.63, 95% CI 1.2, 5.9, p-value 0.019) and values and belief systems (OR .18, 95% CI .1, .37, p-value <0.001) are the major factors that had significant association with contraceptive use among

the adolescents of Mazabuka district. The results show that adolescents who practiced sex more frequently were four times more likely to use a contraceptive and those who visited reported visiting a health facility were nearly three times (OR 2.63) more likely to access contraceptive information and services. However, those who observed religious or cultural values were .18 less likely to indulge in sex and to use contraceptives.

4.2.1 Qualitative Results

On the qualitative arm, four (4) focus-group discussion (FGD) sessions were conducted, one for each selected school. The four secondary schools that were sampled were Kawama, Kaonga, St. Patrick's and Mazabuka Girls'. Each FGD comprised eight (8) purposively selected parents while in-depth interviews (IDIs) were with key informants (School Guidance teachers and SRH health personnel). Since there were no personal identification particulars relating to individual participating girls, questionnaires were marked with serial numbers such that every twelfth (12th) questionnaire was allocated with a second serial number. All the girls that received questionnaires that bore a second serial number had their parents recruited for the discussions. Two local health facilities serving the school catchments – Kaonga and Ndeke Urban Clinics were targeted for health personnel attitudes. An idea that occurred for some frequency in more than one instance among respondents of the same category rose to thematic significance.

4.2.2 Adolescent contraceptive use as taboo

It emerged from all the four Focus Group Discussions with members of the communities that sexual matters were generally not suitable for discussion with children. Parents felt that adolescents were simply young people and culturally it was the role of grandparents to handle subjects of adult nature when the right time came for girls to become women and be ready for marriage:

Family planning is a measure taken by women [not girls] to avoid getting pregnant. It implies that these things are for adults; we don't expect girls to start raising families while young (FGD 7, 05).

Parents raised serious concerns that bordered on suspicion of wild sexual indulgencies by young people if and when matters of contraception arose. In any case, to them, it implied that the young girls were indulging in sexual activities. Therefore, discussing provision of contraceptive services to young people meant encouraging them to indulge in illicit sexual relationships and practices:

But why should anyone wear a raincoat when it is not raining?

If one supports girls using other methods, it means that they [girls]

are also doing what others are doing [that is, practicing sexual intercourse].

(FGD 1, 06)

4.2.3 Contraceptive use as motivation to Promiscuity

This finding was similar to that of a Kenyan study by Ochako et al., (2015), which found the existence of notions that the use of modern contraceptive methods encouraged young women to become sexually promiscuous. Some parents felt that health personnel were expected and required to be specially qualified to teach young people about the realities of adolescence. Noted from this approach was a constantly growing gap between parents and their children in relation to handling of sexual matters. Given the set up, parents identified that they had less and less time of being with their children as many spent most of their day out at work while their children were at school. Schools, too, were not expected to depart from their traditional role of nurturing and mentoring young people in all areas of life to equip them with survival skills that truly prepared them for life in a modern society:

In these modern times, there is need for more specialised training for those who handle these sensitive areas. The other problem is that reliance on contraceptive methods can attract other risks such as overdose while trying to abort; that is serious because it can even result in death. Again on rubber [condom use] and these other methods, there are serious risks regarding use of counterfeit products. Maybe that is why some new diseases such as cervical cancer have become so common nowadays (FGD 4, 02).

Against all odds, parents expected nothing less than abstinence from adolescents whom they consistently considered as essentially children. Thus, there was no opening up of the channel to encourage consideration of methods to ensure prevention of pregnancy among females such

as contraception. For them, contraception was strictly an adult theme suitable only in a marriage context:

Well, girls should not be part of that... [contraceptive use] but for them, abstinence is the one way. For women like us who are married, there are other ways of doing contraception. These girls are still young. Their time will come, so let them learn just to wait (FGD 6, 07).

4.2.4 Policy Implications

The Community attributed it to the School curriculum as partly to blame for introducing ‘babies’ (young school children) to sexual knowledge and so there was no cause to wonder who was responsible when the problem had gone beyond control. It was observed that there was poor timing in introducing sex information to young people:

These children are being introduced to complex subjects that are sensitive and not socially and culturally suitable for their age; they use even words that are taboo and we could not even bear them in our days as young people. You find little children still in Grade 2 have already been taught how a baby is born (FGD 1, 03).

Inconsistent policies and unprecedented shifts in government policy were noted to possibly be a challenge to the acceptance and ownership of certain programmes and activities that could otherwise be good. The issue made for brilliant debates that arose in essentially all the FGDs. The discussions put into different contexts the case of the school re-entry policy that provided for girls who became pregnant to be allowed to return to school to continue their education after they had obtained maternity leave. To a large extent, the question of adolescent sexuality and contraception was blamed on the dynamics of the re-entry policy being implemented by the Ministry of General Education in Zambia:

*Some of these policies require well-laid foundations if the appropriate benefits have to be realised in our local scenario (FGD 8, 07).
Of course, education is good but the change has brought a lot of harm. In the past any schoolgirl who became pregnant... [that one] had chosen to say goodbye to school to become a parent! How many*

pregnancies were there? None! But now...things have changed (FGD5, 03).

*For the girl child, the question of looking for a cure must not arise;
the whole thing must lie on abstinence; prevention is better than cure
(FGD 3, 02).*

4.2.5 Perceptions on Modern Contraceptives as Motivators of Promiscuity

Guidance Teachers as custodians of the right direction in the life of schools were also considered. They found themselves in increasingly challenging situations where their role was almost at an impasse. They were faced with new problems that characterised the sophisticated mind of a modern adolescent female. For instance, there was a problem of attempting to address a situation that even they did not have control of. The task of dealing with adolescent needs especially regarding girls had become increasingly complex:

I wouldn't really encourage pupils to go for contraceptives – if we encourage them to use those, it's like stimulating and encouraging them to do what they shouldn't when they are still in school. (SGT, 01)

Even in girls' talks, we don't even talk about that because there are other dangers [diseases] that one may contract sexually such as HIV; so talking about it [Contraceptive use] is like entertaining sexual indulgence by the young people (SGT, 02).

4.2.6 Risks Involved

There were fears and uncertainties over use of contraceptives which school Guidance teachers highlighted. Such limitations and ideas possibly affected the attitudes of others towards utilisation of those services:

Even if they are to use them, if they do so incorrectly, they will definitely still fall pregnant. If they are to go the rubber method [condom use], they are still not 100 percent protected (SGT, 04).

But we also know that we need to draw a line concerning the age groups of these girls – maybe for senior girls like Grade 12s, we can advise them to use a condom rather than pills.(SGT, 03)

Guidance teachers also brought out lots of myths and misconceptions they were aware of from the community on serious side-effects of contraceptives which were often misleadingly over-generalised. These played a considerably huge part in allaying information and appropriate knowledge to inform proper decision-making among adolescents. For instance, notable fears included that of possible future infertility and barrenness associated with the use of modern contraceptive methods:

The danger I have heard [about] though I am not very sure [is that] it brings infertility; they may not have children at all (SGT 04).

“These contraceptives are for married people. If they start [using] them early, it may affect them in future (I have no proof; I just hear some people say ‘if you use contraceptives for a long time, you can even be infertile at some point’ meaning for those that have not yet had children, they can be barren; but I have no proof (SGT.03).

I will always encourage them to use condoms especially while they are still at school because the consequences [of using other methods] may be too much to handle. It may become an issue of ‘The devil you know being better...’ [Familiarity] when it comes to that (SGT, 01).

The teachers’ perceptions and concerns were in close tandem with the major findings of a Kenyan study by Ochako et al. (2016) in which fear and concerns about family planning were a major barrier to use of contraception among adolescent respondents. Many of their fears were based on myths and misconceptions. The largest concern cited by participants was fear that a particular method would render them infertile; in many cases, this prevented them from using contraception.

Personnel at the health facilities claimed they gave adequate information to adolescents especially those who were in their late teens. It was believed that those were mature enough to make their own independent decisions:

After we have given them enough information, it is up to them to make the right choices because we explain to them; we mention those side-effects. Even legally, it is taken that that person is [those people are] mature enough to make their personal decisions(HP 01).

4.2.7 Accessibility of Modern Contraceptive Services

Health personnel at the facility for both health centres sampled also held that contraceptive services were actually very popular and young people in their teens often made up a good part of the clientele. There was a further claim that many young people knew the importance of having to use a form of contraceptive such that even those that never showed up at the facility were probably obtaining these services from other sources elsewhere:

For girls in school, those who come for family planning services are mostly those who have been pregnant before or have had a child. Girls in this age-group [16-19] who are sexually active are likely using a contraceptive; if they are not coming to the clinic, they may be accessing it somewhere else(HP, 02).

But morally, it's not right, it's something we do against our will; if I had it my way, I would ask them to go flat out on abstinence because once a girl starts using contraceptives, her life just changes automatically because you know they have started engaging in this [sex] (HP 01).

4.2.8 Confidentiality and Community Values

Confidentiality at the point of issue of contraceptive services really mattered a lot. Cultural circumstances surrounding contraceptive use often went beyond just the provision of the service itself but what it was linked to. Consumers of these services were looked upon as indulging in sex. Against that backdrop, young people who were not married, and particularly those still in school would often shy away from freely going to attend a health facility to seek these services:

Our culture prohibits them to seek these services because of cultural beliefs and social stigma. They may also be afraid of school authorities. When we see them in school uniform, we actually give them first priority because we know they are going back [to school]. We also encourage them not to fear but still, they want to be confined – they feel like being alone with their fellow youths. So the Youth Friendly Corner is helpful when

it comes to making them feel free because they will be attended [to] by fellow youths (HP 02).

This finding goes in tandem with a study done in Ethiopia which recognised a need for further training of health-care providers to address a situation where more than half (57.5%) of the respondents perceived the provision of contraceptives to unmarried adolescents as promoting sexual promiscuity (Ahanonu, 2013) .

Concerning stocking of contraceptive supplies, they were reportedly only adequate and according to facility service providers, whatever clientele they had, they were able to meet right up to the demand so that if any were not accessing the service it was not out of shortage but probably for other reasons:

These are readily available. For example, the Jadel, young ladies are having it; they have now known it and liked it – in the past they [it] used to expire in our cupboards(HP, 02).

CHAPTER FIVE: DISCUSSION

This section is a discussion of major findings from the study. It mainly focuses on addressing the general objective which was aimed at determining the prevalence of contraceptive use and factors associated with it among adolescent females. It also describes perceptions held by the community regarding adolescent use of contraceptives.

5.1 Prevalence of Contraceptive Use

The results of this show prevalence of contraceptive use was about 17% (65/369), meaning that one in every 17 girls who were selected for the study and were sexually active was using or had used a contraceptive.

5.2 Age and Contraceptive Use

The study shows that age affected adolescent response to the demands of growing up into adulthood. The odds of an adolescent using a contraceptive increased two-fold (OR 2.28) for every year she grew older. This could be linked to the correspondingly increasing likelihood of them having sex more regularly as they grew older. Educational level even by one year progressive difference increased the odds of a girl using a contraceptive by 1.8 (OR 1.83) times. This means those who were in Grade 12 were almost twice more likely to use a contraceptive than those who were in Grade 11 and they in turn more than those in Grade 10, the precedent lower grade. This implies that older girls had more knowledge and better understanding of the advantage of using some form of modern contraceptives so as to prevent pregnancy. That in turn reduced risk of mortality resulting from abortion attempts that went with unintended pregnancy.

5.3 Sexual Relationships and Contraceptive Use

Results show that having a boyfriend also predisposed young women to using a contraceptive in quite similar manner as did frequency of sexual activity by up to five times (5.31 and 5.78 times respectively). This could largely suggest that those who were in more stable and permanent relationships with regular boyfriends were also quite likely to indulge in sexual activities with the same partners more regularly. Thus, they would be expected to realise the need to consider preventing pregnancy by use of a form of contraceptive. The implications of

that would be provision of safeguards against the risks and other outcomes of adolescent involvement in intergenerational- and multiple-sexual partnerships with migrant workers in the sugar plantation and processing plant, who wield strong economic power that could attract young females.

5.4 Pregnancy History and Contraceptive Use

The variable relating to history of pregnancy could account for such adolescents as being responsive to utilisation of modern pregnancy control measures so as to avoid recurrence of pregnancy. The motivation to that effect was the wish to avoid risky sexual behaviour so as to continue with their education, for they possessed knowledge of the challenges of adolescent motherhood from experience. That would in the process provide them with a furtherance of their education which would delay their subsequent pregnancy.

5.5 Frequency of Sex and Contraceptive Use

The study revealed that there was an association between frequency of sex and contraceptive use among adolescent females. Girls who had boyfriends and indulged in regular sex tended to be more cautious against falling pregnant and used contraceptives more than their naïve counterparts who indulged on a lesser frequency. Thus, they were sure to stay safe from unintended pregnancies and possible abortions with their associated risks of mortality and morbidity. These findings were similar to those of a study done on Nicaraguan adolescents, which also found that high levels of interest in avoiding pregnancy suggest that a targeted intervention could overcome the identified social and educational barriers and increase contraceptive use among adolescents (Parker et al., 2016).

5.6 Visits to Health Facility and Contraceptive Use

Young women who claimed to have paid regular visits to a health facility for alternative services (not for illnesses) were 3.4 (3.38) times more likely to use contraceptives. These characteristics had varying influences on adolescents' choices regarding whether or not they indulged in sex. This indicated that when they did, they had the power of deciding whether or not to use a contraceptive as well as which method to possibly select. This outcome is consistent with a study conducted in the United States which found a number of barriers that

included consent and confidentiality for adolescent patients; providers' attitudes, misconceptions and limited training; and patients' lack of awareness or misconceptions. The study also identified individual-level access barriers such as providers' misconceptions and gaps in technical training as well as patients' lack of awareness (Kumar and Brown 2016). Moreover, Parker et al. (ibid) in their Nicaraguan study further found that respondents thought a nearby clinic, clean water, more medications, more money, and electricity would be most beneficial for their health. However, breaking through the barriers of cultural environments to access these services required more than proximity. This was reflected by the levels of apathy among adolescents to get to a health facility that was within a short walking distance from their home.

5.7 Cultural Values and Contraceptive Use

There was an association between values, be it cultural or religious and contraceptive use. This means that belief in some values had an influence on the levels and chances of those who held a form of such values or beliefs using contraceptives. It might be worth noting that the dividing line between observance of such values or beliefs and an individual's personal fears seeking SRH services particularly contraceptives in some cases was so thin. A study by Sambo et al. (2014) on adolescent undergraduate students at two universities in Tanzania found that the most popular method of contraception used were condoms, withdrawal and periodic abstinence whereas the main sources of information about contraception were from friends. The findings of this study were much similar. On the Zambian scenario, the cultural challenge posed by the unmet need for guaranteed safe SRH services for adolescents is real. This is compounded by the banning of the distribution of condoms in schools in 2004 by the Ministry of Education and the Zambia National Union of Teachers (ZNUT) citing it as tantamount to encouraging premarital sex instead of propagating abstinence among young people (MOE, 2012; ZNUT, 2012).

5.8 Community Perceptions on Adolescent Contraceptive Use

Perceptions comprise ideas and beliefs that are primarily dominant with regard to how people view a particular practice – the use of contraceptives by young people in this case. In the case of the community, parents were against acceptance of young people using any form of

pregnancy prevention as they believed it made girls lose that fear of having unwanted pregnancies. They associated loss of such fear with a triggering of many adolescents losing their morals by living very loose sexual lives. Community members clearly linked loose sexual lifestyles to serious social and health problems such as the spread of the deadly HIV/AIDS.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusion

The level of unmet need for modern contraception, prevalence of unintended pregnancy and risk of unsafe abortion among adolescent females are linked to inherent cultural and religious values of the study area. The study revealed that the prevalence of contraceptive use was low at 17.6% in view of the proportion of adolescents who were sexually active.

Contraceptives are generally viewed with an eye of stigma, particularly among young people. Adolescents still shun the health facility. This study highlights the social complexity of cultural beliefs and perceptions relating to contraceptive use among female adolescents in Mazabuka . Whether or not an adolescent has access to Sexual Reproductive Health services and the decision whether or not to use them is primarily influenced by others from the socio-cultural environment of the study area. The attitudes, perceptions and values of the community often tend to be more important than an individual's own ultimate choices and actions.

6.2 Recommendations

Levels of access to contraceptive use among female adolescents in this study demonstrate the need for comprehensive and accessible SRH services in Mazabuka.

Sensitisation of communities in modern contraception for adolescents could scale up positive attitudes to help in access of information and knowledge in order to enhance adolescent decision-making that promotes sexual reproductive health, particularly modern contraception.

This can be domesticated through provision of safe and appropriate fertility regulation measures and population safeguards such as contraceptives, especially among young people. Similar studies in future should consider dimensions that could improve findings through diversity of the aspects of the study. Generally, the study achieved its goal.

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APPENDICES

Appendix 1: Information Sheet

Topic: Community Perceptions and Factors Associated With Contraceptive Use among Adolescent Females in Mazabuka District

Dear Participant,

Greetings,

My name is DANIEL MUDENDA, a graduate student doing Population Studies at the University of Zambia. I am carrying out a study on **‘Community Perceptions and Factors Associated With Contraceptive Use among Adolescent Females in Mazabuka District’**. I would like to ask you to read through this paper or have someone read it to you before you can decide whether or not to take part in the study.

1. Why this study is being done?

The purpose of this study is to find out how easy or difficult it is for young people in Mazabuka District to access contraceptive services and the levels of utilisation of contraceptives. Contraceptives are materials that are used for birth-control or prevention of pregnancy. The research will be conducted through a survey involving voluntary participants to be selected from females aged 16-19. Being in this age group, you are being requested to take part in the study.

2. What you will be asked to do in the research

Your role in this research will be to provide responses through answering some questions in a questionnaire on contraceptive use in your area by females in your age group. This interview or discussion is expected to last about thirty minutes.

3. Risks and discomforts

To help us obtain all the information that we need, we request participants to share their views by answering some questions. In doing so, however, there could be certain risks that might arise.

This research may not be associated with any risks of a physical nature but it will involve discussion of sexual reproductive issues which may be considered quite personal. In view of that, you are free not to answer any questions on issues you might consider private and quite sensitive. Your identity will also be protected as personal identification details such as your name will not be included on your response record.

4. Benefits of the Research

This study will not have any direct personal benefits to you as an individual but it aims at influencing policy decisions at a higher level that may benefit the whole community in future.

5. Fairness and Voluntary Participation

Please note that you have an equal chance to participate in this study as other members of your age group. Therefore, your participation is purely voluntary and you will not be subjected to any unfair treatment if you decide not to participate in the study.

Since participation in the study is purely voluntary, you may choose to stop participating at any time during the interview if you feel like doing so.

6. Confidentiality

All the information that will be collected in this study will be treated as confidential. This means that it will be kept secret and never be traced or linked to you. To help us do this, you will not be asked for any personal identity details. This means that you shall not put your name on any paper that may be used to record your answers. All the information you give will be looked at and at the end of the study, it may be used in a publication.

Please feel free to ask if you have any questions concerning the study. Otherwise, if you have any questions about this process or about your rights as a participant in the study, you may contact the Chairperson of the Ethics Committee at The University of Zambia, Box 50110, LUSAKA.

*If you agree to take part in this research you will be given a **Consent Form** to sign.*

*****Thank you for taking time to read this.*****

Appendix II: Informed Consent Form

Topic: Community Perceptions and Factors Associated With Contraceptive Use among Adolescent Females in Mazabuka District

Informed Consent (TO BE COMPLETED BY THE RESPONDENT)

(PLEASE CIRCLE THE APPROPRIATE ANSWER)

1. Has the study on Contraceptive Use (as indicated in the title above) been explained to you?
YES/NO

2. Have you been given an Information Sheet for Participants? **YES/NO**

3. Have you been given a chance to ask questions and discuss this study? **YES/NO**

4. Have you been advised that some of the issues the study looks at may require personal information that may be sensitive? **YES/NO**

5. Do you understand that the information you give will not be traced and connected to you after the study? **YES/NO**

6. Do you understand that you will have no personal benefit from participating in this study?
YES/NO

7. Have you been informed that participation in the study is purely voluntary and you are:
(a) free to stop at any time if you feel like not continuing with it?
YES/NO
(b) not compelled to answer any question(s) that you are not comfortable with?
YES/NO

This study has been reviewed and approved by the Biomedical Research Ethics Committee of the University of Zambia (UNZABREC). If you have any questions about this process or about your rights as a participant in the study, you may contact the Chairperson of the Ethics Committee at The University of Zambia, Box 50110, LUSAKA.

Signature **Date**
Respondent

Signature **Date**
Investigator

Appendix III: Letter to Parents

Dear Parents/Guardian,

My name is DANIEL MUDENDA. I am a postgraduate student carrying out a study. I sent this letter to you to request and explain that I would like your child to take part in a study that I am conducting among pupils here in Mazabuka District.

With your permission, I will ask your child to complete a questionnaire that would take about 15-30 minutes. Participation in the study is purely voluntary; so she is free to participate or not, to stop at any point in the process if she does not feel like continuing and also not to answer any questions she might feel uncomfortable with. The study will be conducted during a time that will not interfere with normal learning.

There are no known risks involved in this study but to protect your child's confidentiality, her name will not appear on the questionnaire. The questionnaire once completed will not be shared with anyone unless required by law. The results of this questionnaire will be maintained by me. This letter serves as an assent form for your child's participation and will be kept under my care purely for record during the entire period of the study.

Please tick in the circle of your choice, sign the form and let your child return it to the school headteacher where I can collect it from. Note that the school will not keep a record of your child, either.

Allowed **Not allowed** Signed (Date).....

If you have any questions regarding your child's participation, please contact me on 0977578763, my Principal Supervisor Dr. Banda on 0964860610, or otherwise the Chairperson, University of Zambia Research Ethics Committee at Tel: 021-256067.

Thank you.

Yours,

DANIEL MUDENDA
(RESEARCHER)

Appendix IV: Questionnaire

Study Title: Community Perceptions and Factors Associated with Contraceptive Use among Adolescent Females in Mazabuka District

Questionnaire Reference NumberDate (DD/MM/YYYY).....

Province.....District.....

Town.....School.....

INSTRUCTIONS

Do not write your name on this paper.

Write or tick (√) to indicate your response as required.

You are advised to answer all questions.

Question No.		DO NOT USE
1.	How old are you? (Please specify your age at last birthday) <input style="width: 50px; height: 25px; border: 1px solid black;" type="text"/>	<input style="width: 50px; height: 25px; border: 1px solid black;" type="checkbox"/>
2.	What is your educational level or grade? <input style="width: 70px; height: 25px; border: 1px solid black;" type="text"/>	<input style="width: 50px; height: 25px; border: 1px solid black;" type="checkbox"/>
3.	What kind of family do you live with? 1. Both parents () 2. Mother only () 3. Father only () 4. Other (Specify).....	<input style="width: 50px; height: 25px; border: 1px solid black;" type="checkbox"/>
4.	What is the Occupation or type of work done by the head of the household you mentioned in Question 3 above? 1. GRZ () 2. Private Company ()	<input style="width: 50px; height: 25px; border: 1px solid black;" type="checkbox"/>

5.	<p>3. Other ()</p> <p>4. Specify</p> <p>What is your religious denomination (church)?</p> <p>1. Catholic ()</p> <p>2. SDA ()</p> <p>3. Pentecostal ()</p> <p>4. Other (Specify).....</p>	
6.	<p>Do you have a boyfriend? 1. Yes () 2. No ()</p>	<input type="checkbox"/>
7.	<p>Have you ever had sex? 1. Yes () 2. No ()</p>	<input type="checkbox"/>
8.	<p>Did you use a condom? 1. Yes () 2. No ()</p>	<input type="checkbox"/>
9.	<p>Have you ever been pregnant? 1. Yes () 2. No ()</p>	<input type="checkbox"/>
10.	<p>How often do you practice sex in a term?</p> <p>1. 0 times ()</p> <p>2. 1 time ()</p> <p>3. 2 or more times ()</p>	<input type="checkbox"/>
11	<p>Do you know about modern contraceptives? If you do, mention any contraceptive methods you know.</p> <p>1..... (1)</p> <p>2..... (2)</p> <p>3..... (3)</p> <p>4..... (4)</p>	<input type="checkbox"/>



12	<p>How did you get to know about the method(s) you wrote in (b) above?</p> <p>1. Through radio and TV ()</p> <p>2. Heard from friends ()</p> <p>3. Heard from parents ()</p> <p>4. Other (Specify)</p>	<input type="checkbox"/>
13	<p>.....</p>	
14	<p>About how far is the nearest health centre or hospital from your home? (Researcher may help with estimates of distance (km) or walking time)</p> <p>1. 0 - 5 km ()</p> <p>2. 6 - 10 km ()</p>	<input type="checkbox"/>
15.	<p>Do you ever visit the clinic for assistance such as counselling apart from when you are sick?</p> <p>1. Yes ()</p> <p>2. No ()</p>	<input type="checkbox"/>
	<p>Do you have any religious or cultural values or beliefs regarding sexuality and use of contraceptives?</p> <p>1. Yes ()</p> <p>2. No ()</p> <p>3. I don't know ()</p> <p>4. Not sure ()</p> <p style="text-align: center;"><u>The End</u></p> <p style="text-align: center;"><i>Thank you for your participation!</i></p>	<input type="checkbox"/>

Appendix V: Interview/Discussion Guide

(Approximately 30 minutes)

1. Welcome the participants to session.
.....
2. Self-introduction (Be genial and pleasant).
.....
3. Help the participants open up and relax.
.....
4. State the purpose of the discussion/ specific objectives of the session/study
.....
5. Explain the means to record the session.
.....
6. Reassure discussants of confidentiality.
.....
7. Ask for the consent of participants to take part in the research and remind them that it is a voluntary move taken by each one of them
.....
8. What is their understanding of means of pregnancy prevention? (Get a variety of answers).....
9. Get to modern contraceptive methods. What do they know?
.....
10. (a) What views do they hold about who should use modern contraceptives? Can and should young people use them? (Views for discussion).....

Thank discussion/interview participants for their participation

Appendix VI: Ethical Approval

Appendix VII: Permission Letters

(i) Ministry of Health

(ii) Ministry of General Education

Box 670 437,
Mazabuka.

17th October, 2017.

The District Education Board Secretary,
Ministry of General Education,
Mazabuka District Education Board,
B0x 670144,
Mazabuka.

Dear Sir,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN SECONDARY SCHOOLS

I request to seek the permission of your office to conduct research in selected secondary schools in the district. I am a student at the University of Zambia reading for a masters in Population Studies.

This study targets four secondary schools in Mazabuka urban with particular focus on modern contraceptive use among young people in the district. The title of my study is 'Prevalence, Community Perceptions and Factors associated with Contraceptive Use in Mazabuka District'.

This survey requires me to collect data from female pupils in grades 10-12 who are aged 16-19 using a questionnaire. The study will also involve brief interviews with Guidance teachers for key informant data.

Fours (4) secondary schools have been selected for this purpose. These are St. Patrick's, Mazabuka Girls', Kawama and Kaonga. The survey is purely for study purposes only, for the award of a degree. Therefore, I am willing to observe any guidelines your office may give. Consideration has also been made to follow the advice and suggestions of respective schools regarding times that may suit their timetables so as not to disrupt learning activities.

Your positive consideration in this regard will be greatly appreciated.

Yours faithfully,

Daniel Mudenda
Student/Researcher
(0977578763)

(iii) Letter to Selected Schools

Box 670 437,
Mazabuka.

10th November, 2017.

The Headteacher,

.....,

1. St.Patrick's Secondary School,
2. Mazabuka Girls' Secondary School,
3. Kawama Secondary School,
4. Kaonga Secondary School,

Dear Sir,

REQUEST FOR PERMISSION TO CONDUCT RESEARCH IN YOUR SCHOOL

I am a student at the University of Zambia reading for a masters in Population Studies. I am conducting research covering four secondary schools in Mazabuka district. I wish to inform you that your school has been selected in this sample.

My study focuses on use of modern contraceptives among young people in the district. The title of my study is 'Prevalence, Community Perceptions and Factors associated with Adolescent Contraceptive Use in Mazabuka District'.

The survey intends to use a questionnaire to collect data from female pupils in Grades 10-12 who are aged 16-19. It will also involve brief interviews with Guidance teachers for key informant data.

The study is purely for academic purposes only, leading to the award of a degree. Therefore, consideration is made to comply with your requirements with respect to your timetable so as not to disrupt learning activities.

Your positive consideration in this regard will be greatly appreciated.

Yours faithfully,

Daniel Mudenda
Student/Researcher
(0977578763)